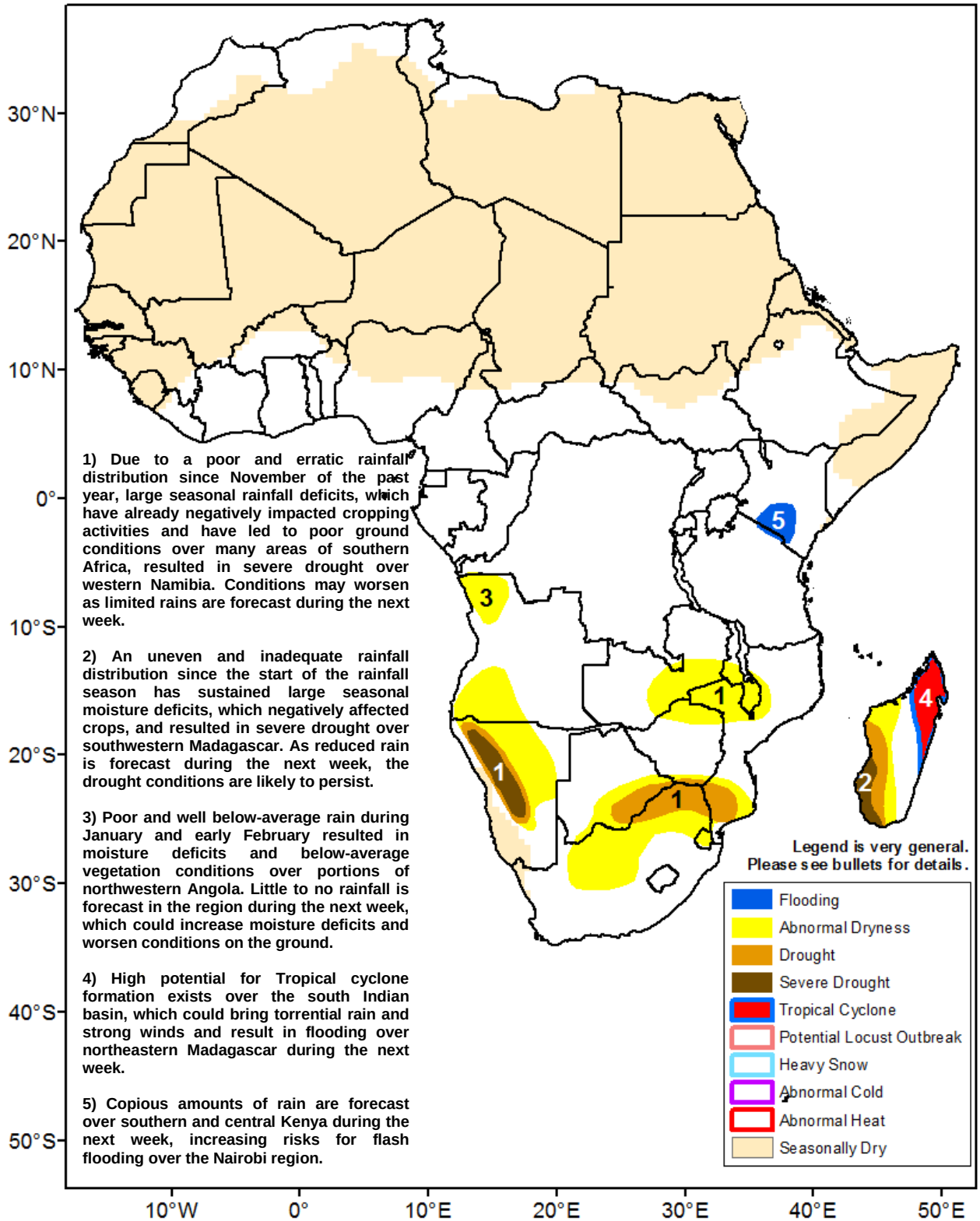
Climate Prediction Center's Africa Hazards Outlook
March 15 – 21, 2018

- **Large rainfall deficits since the beginning of the Southern African monsoon have resulted in severe drought in western Namibia and southwestern Madagascar.**
- **Heightened potential Tropical cyclone formation and forecast heavy downpours increase risks for flooding over northeastern Madagascar and Nairobi region of Kenya, respectively.**



1) Due to a poor and erratic rainfall distribution since November of the past year, large seasonal rainfall deficits, which have already negatively impacted cropping activities and have led to poor ground conditions over many areas of southern Africa, resulted in severe drought over western Namibia. Conditions may worsen as limited rains are forecast during the next week.

2) An uneven and inadequate rainfall distribution since the start of the rainfall season has sustained large seasonal moisture deficits, which negatively affected crops, and resulted in severe drought over southwestern Madagascar. As reduced rain is forecast during the next week, the drought conditions are likely to persist.

3) Poor and well below-average rain during January and early February resulted in moisture deficits and below-average vegetation conditions over portions of northwestern Angola. Little to no rainfall is forecast in the region during the next week, which could increase moisture deficits and worsen conditions on the ground.

4) High potential for Tropical cyclone formation exists over the south Indian basin, which could bring torrential rain and strong winds and result in flooding over northeastern Madagascar during the next week.

5) Copious amounts of rain are forecast over southern and central Kenya during the next week, increasing risks for flash flooding over the Nairobi region.

While large rainfall deficits persisted over Southern Africa, negative rainfall anomalies emerged over central Ethiopia.

A comparison of the cumulative rain since January to date with climatology has depicted negative anomalies over many areas of Southern Africa, with the largest (> 100 mm) deficits over western Angola, western Namibia, southeastern Zambia, southern Malawi, and western Madagascar (**Figure 1**). Over western Madagascar and western Namibia, the large negative departures were mainly attributed to a poor and erratic rainfall distribution during January and February. The insufficient rain has already negatively affected crops over many local areas of each region, according to reports. In contrast, positive rainfall anomalies, which were associated with an enhancement in rainfall during February, were recorded across the central portions of Southern Africa, including southwestern Zambia, northern Botswana, Zimbabwe, and central Mozambique.

Farther north, over Equatorial Eastern Africa, while positive rainfall anomalies were observed over much of Kenya, portions of southern Somalia, and southern Ethiopia, negative anomalies began to emerge over the central parts of Ethiopia. Over southern Ethiopia and Kenya, the observed wetter than average conditions were associated with increased and above-average rain during early March and should, in general, help to aid cropping activities over many local areas of the region.

Satellite Estimated Rainfall (mm)
Valid: January 01 – March 13, 2018

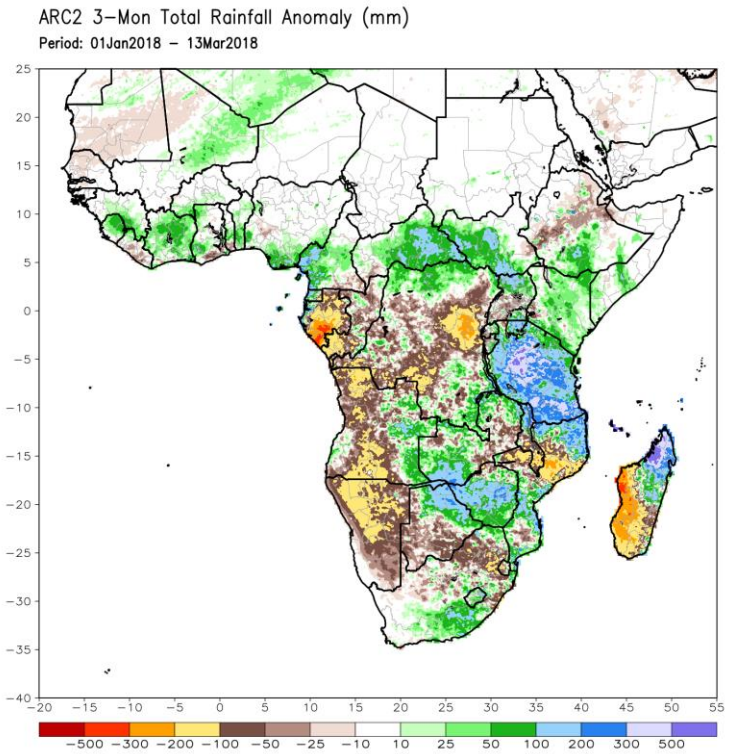


Figure 1: NOAA/CPC

Suppressed rains observed over western Angola, the southern parts of Zimbabwe and Mozambique, northern South Africa, and southern Madagascar.

During the second week of March, while scattered, moderate to heavy rain continued across central and eastern Southern Africa, including Zambia, Botswana, eastern Tanzania, and northern Madagascar, suppressed rain prevailed over western Angola, southern Zimbabwe, northern South Africa, southeastern Botswana, southern Mozambique, and southern Madagascar (**Figure 2**). Over the latter areas, this past week's rainfall totals were below-average and contributed to increasing accumulated moisture deficits in the region.

As a response to rainfall evolution over the recent weeks, an analysis of recent vegetation indices has showed that ground conditions have worsened over western Namibia and southwestern Madagascar, but have improved over portions of central South Africa. Vegetation conditions also remained below-average over several local areas, including northern South Africa, eastern Botswana, southeastern Zambia, and western Mozambique.

During the next week, rainfall forecasts suggest torrential rain, which increases risks for flooding over northeastern Madagascar due to high potential for Tropical cyclone formation over the south Indian Ocean. Meanwhile, heavy rain is expected from central Angola, southern DRC, northern Zambia, Tanzania, and Kenya to southern Ethiopia. In Kenya, the forecast torrential rain could trigger flash flood over local areas, particularly the Nairobi region.

7-Day Satellite Estimated Rainfall Anomaly (mm)
Valid: March 07 – March 13, 2018

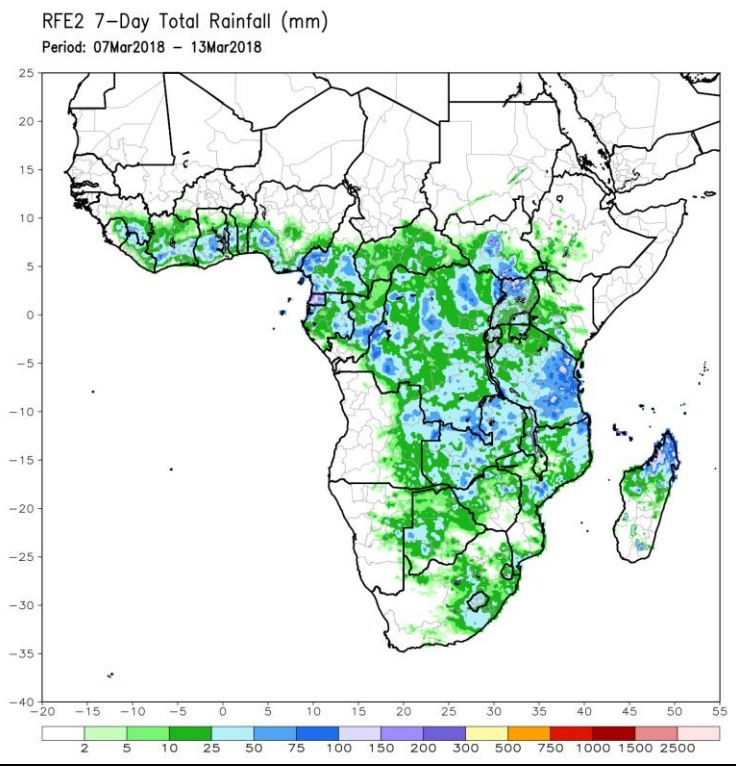


Figure 2: NOAA/CPC

Note: The hazards outlook map on page 1 is based on current weather/climate information and short and medium range weather forecasts (up to 1 week). It assesses their potential impact on crop and pasture conditions. Shaded polygons are added in areas where anomalous conditions have been observed. The boundaries of these polygons are only approximate at this continental scale. This product does not reflect long range seasonal climate forecasts or indicate current or projected food security conditions.

Questions or comments about this product may be directed to Wassila.Thiaw@noaa.gov or 1-301-683-3424.